

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference B04/0067PC	FOR FURTHER ACTION		See item 4 below
International application No. PCT/EP2005/001200	International filing date (<i>day/month/year</i>) 07 February 2005 (07.02.2005)	Priority date (<i>day/month/year</i>) 09 February 2004 (09.02.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant BASF AKTIENGESELLSCHAFT			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland		Date of issuance of this report 03 October 2006 (03.10.2006)
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PATENT COOPERATION TREATY

TRANSLATION

PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

See form PCT/ISA/210

Applicant's or agent's file reference

B04/0067PC

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2005/001200

International filing date (day/month/year)

07.02.2005

Priority date (day/month/year)

09.02.2004

International Patent Classification (IPC) or both national classification and IPC

C08G71/02

Applicant

BASF AKTIENGESELLSCHAFT

1. This opinion contains indications relating to the following items:



Box No. I

Basis of the opinion



Box No. II

Priority



Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



Box No. IV

Lack of unity of invention



Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement



Box No. VI

Certain documents cited



Box No. VII

Certain defects in the international application



Box No. VIII

Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/001200

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/001200

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-10	YES
	Claims		NO
Inventive step (IS)	Claims	1-10	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO
2. Citations and explanations:			
Reference is made to the following documents:			
D1: DE 17 70 413 A1			
D2: DE 102 04 979 A1 (cited in the application)			
1. <u>Novelty (PCT Article 33(2))/Inventive step (PCT Article 33(3))</u>			
<p>The subject matter of current claims 1-10 is novel over the prior art as cited in the international search report. None of the documents mentioned in the international search report discloses a <u>process for the production of highly functional and highly reactive polyureas</u> via reaction of <u>ureas</u> with one or more <u>amines</u> having at least two primary and/or secondary amino groups, where at least one amine has at least three primary and/or secondary amino groups, the corresponding polyureas and their use for production of, <i>inter alia</i>, paints, adhesives, casting elastomers and foams.</p> <p>The subject matter of current claims 1-10 involves an inventive step, since, for the following reasons, neither document D1 alone, which can be considered to be closest prior art, nor D1 in conjunction with any other document mentioned in the international search report gives any indication of the claimed process, the corresponding product or its use:</p> <p>D1 discloses partially crosslinked polyureas produced from diamines, urea and very small amounts of bisepoxide as crosslinking agent. The subject matter of current claim 1 differs from D1 in the use of polyamines having at least three primary and/or secondary amines. The provision of highly functional and highly branched polyureas which have good solubility, and also of a simplified alternative process for their production, is considered to be a technical</p>			

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

problem.

The technical problem is solved via the process mentioned, and soluble polyureas derived from diethylenetriamine and urea (example 9) and from a mixture of tris(aminoethyl)amine/isophoronediamine and urea (example 8, table 1) are thus produced. These ureas can also be subsequently functionalized (see page 13, line 22 - page 14, line 17). The process mentioned for production of polyureas is not obvious from the prior art, and D2 indicates the production of highly functional, highly branched polyureas via reaction of polyamines with capped polyisocyanates, and the application can therefore be considered as involving an inventive step.

2. Industrial applicability (PCT Article 33(4))

The invention relates to highly branched polyureas and is therefore industrially applicable.